

REMARKS

Claims 7 and 8 are amended and claims 1-6, 9 and 10 are cancelled herein without prejudice or disclaimer. New claims 11-28 are added. Each of claims 11-28 is supported by the original specification and drawings, for example, at least with respect to Fig. 2 and page 10, line 15 to page 11, line 10. No new matter has been added to the application.

Claims 1-10 have been rejected under 35 U.S.C. 102(b) as being anticipated by Rudolf (DE 44 30 408). This rejection is moot with regard to cancelled claims 1-6, 9 and 10. With regard to claims 7 and 8, as amended herein, this rejection is respectfully traversed.

In particular, it is respectfully submitted that a joint structure of a superconducting cable, as recited in claim 7, is neither disclosed nor suggested by the Rudolf reference.

In the Office Action dated September 19, 2005, the Examiner stated that “Rudolf discloses a joint structure (Figs 1-2) ... wherein a connecting portion (top portion) between the conductor connecting member (2) and the superconducting cable (1) is arranged inside a hollow tube (inside 4) that is provided at the core portion of the insulating spacer (22, Fig. 2).” (Office Action, pg. 4, l. 22 through pg. 5, l. 7.) That characterization of the Rudolf reference is respectfully traversed, in that the element that the Examiner refers to as the “hollow tube” (element 4 in Rudolf’s Fig. 2) does not appear to be provided at the core portion of an insulating spacer. The tube 4 is shown in Fig. 2 of the Rudolf reference as being located outside of the element labeled 22 (which the Examiner refers to as an insulating member). Because the element 4 is located outside of element 22, element 4 could not be “a hollow tube that is provided at a core portion of said insulating spacer,” as recited in claim 7. Accordingly, it is respectfully submitted that original claim 7 is patentably distinguished over the Rudolf reference.

Furthermore, claim 7, as amended herein, is further distinguished from the Rudolf reference. In particular, amended claim 7 recites that the insulating spacer covers a region extending at least from a connected portion of the superconducting cable and the conductor connecting member to a connected portion of the long conductor and the conductor connecting member. As described in the present application, “[w]hen the connecting portion is arranged inside hollow tube 22, the joint structure of the superconducting cable can be decreased in length by the lengths of conductor connecting member 24 and the terminal

portion of superconducting cable 21.” In contrast, Rudolf’s element 22 (characterized by the Examiner as an insulating spacer) does not extend over the connection of the superconducting cable 1 and the element 2 (characterized by the Examiner as a conductor connecting member). Indeed, with reference to Fig. 2 of the Rudolf reference, the location at which the superconducting cable 1 connects with the element 2 is outside of the structure of element 22 and, as noted above, is not within a hollow tube that is at a core portion of an insulating spacer (or of Rudolf’s element 22). Rudolf’s structure would not provide the decreased length advantage described in the present application. Accordingly, amended claim 7 is believed to be patentably distinguished over the Rudolf reference.

Claim 8 is further distinguished from the Rudolf reference. In particular, claim 8 recites that “a connecting portion of said conductor connecting member and said long conductor is arranged inside the hollow tube provided at the core portion of said insulating spacer.” As noted above, Rudolf does not describe or suggest a hollow tube provided in the core portion of an insulating spacer, as claimed. The element 22 (which the Examiner cites as an insulating spacer) has no hollow tube structure in its core. Instead, the element 22 has a further element 2 (characterized by the Examiner as a conductor connecting member) that is disposed directly in the core of the element 22, and not in a hollow tube within the core of element 22. Thus, claim 8 is believed to be further patentably distinguished over the Rudolf reference.

Accordingly, it is submitted that each of claims 7 and 8, as amended herein, are patentably distinguished over the Rudolf reference. The rejection of those claims is, therefore, respectfully traversed.

New claims 11-28 are added to further protect additional aspects of embodiments of the invention. New claims 11-19 are dependent, directly or indirectly, on claim 7 and, thus, are believed to be allowable over the prior art of record, at least for reasons as discussed above with respect to claim 7. In addition, each of new claims 11-19 features that further distinguish those claims over the references of record, including Rudolf.

Claims 12-14, 18 and 19, each recite further features associated with the hollow tube at the core of the insulating spacer. As noted above, Rudolf does not disclose or suggest a hollow tube at the core of element 22 (characterized by the Examiner as an insulating spacer).

Similarly, Rudolf also does not disclose or suggest a hollow tube at the core of an insulating spacer, where the hollow tube is composed of an electrical insulating material, a resin material, the same material as said insulating spacer, a conductive material or a conductive aluminum. With respect to claims 16 and 17, Rudolf also does not disclose or suggest an insulating spacer that has a middle section and two opposite ends, wherein the middle section is thicker than ends, or an insulating spacer having two tapered ends. Instead, Rudolf's element 22 is thicker on one end and thinner on the other end, in a single, continuous taper.

New claim 20 is believed to be patentably distinguished over the references of record, for reasons similar to those discussed above with respect to claim 7. For example, claim 20 includes a "conductor connecting member [that] has a pair of connecting portions disposed within the hollow tube for connecting to the superconducting cable and the further cable, respectively." Claim 20 further recites that "the insulating spacer covers a portion of the conductor member that extends at least from the connecting portion of the conductor connecting member and the superconducting cable to the connecting portion of the conductor connecting member and the further cable." As discussed above with respect to claim 7, Rudolf's element 22 does not include a hollow tube at its core and does not have a conductor connecting member with connecting portions disposed within such a hollow tube.

New claims 21-28 are dependent, directly or indirectly, on claim 20 and, thus, are believed to be allowable over the prior art of record, at least for reasons as discussed above with respect to claim 20. In addition, each of new claims 21-28 recite features that further distinguish those claims over the references of record, including Rudolf, in a manner similar to claims 12-14, 18 and 19, as discussed above. Accordingly, it is respectfully submitted that each of new claims 11-28 is patentably distinguished over the Rudolf reference.

Applicant has also considered the references to Yamaguchi (USP 6,112,531), Sinha et al. (2004/0211586 and Rasmussen (WO 02/029930 A3) that were cited by the Examiner, but not applied in any rejection. It is respectfully submitted that the present claims are patentably distinguished over those references, at least for reasons similar to those discussed above with respect to the Rudolf reference.

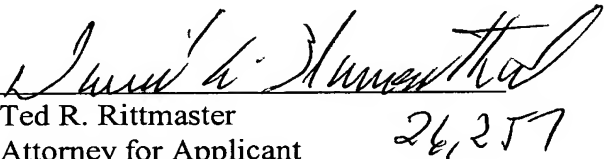
Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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